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## **Radiation Physics for Personnel and Environmental Protection**

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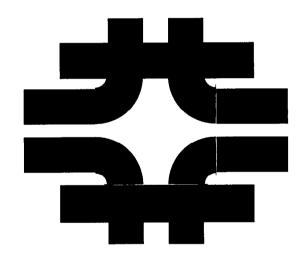
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# RADIATION PHYSICS FOR PERSONNEL AND ENVIRONMENTAL PROTECTION

# J. DONALD COSSAIRT FERMI NATIONAL ACCELERATOR LABORATORY



US PARTICLE ACCELERATOR SCHOOL
Florida State University-1993
Duke University-1995
University of California-1997
Vanderbilt University-1999

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#### **PREFACE**

The original version of this text was presented as part of a course taught at the session of the U. S. Particle Accelerator School held at Florida State University in January 1993. Subsequently, the material was further refined and presented as a course at Fermilab in the spring of 1993 and autumn of 1994. Later, the course was presented at the USPAS sessions held at Duke University in January 1995, at the University of California in January 1997, and at Vanderbilt University in January 1999. This fourth revision represents a compilation of the work of numerous people and it is hoped that the reference citations lead the reader to the original work of those individuals who have developed this field of applied physics. Over the years, I have been greatly enriched to have been acquainted personally with many of these fine scientists. The problems supplied with each chapter were developed with the goal of promoting better understanding of the text.

## **Radiation Physics for Personnel and Environmental Protection**

### **Table of Contents**

Chapt	er 1 Composition of Accelerator Radiation Fields	
I.	Review of units, terminology, physical constants, and material properties	1-1
П.		1-9
Ш.		1-10
	Radiation production by electron accelerators	1-12
	Radiation production by proton accelerators	1-27
	Primary radiation fields at ion accelerators	1-38
	References	1-43
	Problems	1-47
Chapt	er 2 Shielding of Electrons and Photons at Accelerators	
I.	The electromagnetic cascade-introduction	2-1
Π.	The electromagnetic cascade process	2-5
	Hadron production by the electromagnetic cascade	2-11
	Theory of radiation transport and the Monte Carlo method	2-14
	Brief review of magnetic deflection of charged particles	2-21
	References	2-24
	Problems	2-26
Chapt	ter 3 Shielding of Proton and Ion Accelerators	
I.	Hadron (neutron) shielding for low energy incident protons	3-1
	Limiting attenuation at high energy	3-4
Ш.		3-7
IV.	Shielding materials and neutron energy spectra	3-36
	References	3-49
	Problems	3-53

## Radiation Physics for Personnel and Environmental Protection

Chapt	er 4 Low Energy Prompt Radiation Phenomena	
I.	Introduction	4-1
П.	Transmission of photons and neutrons by penetrations	4-1
Ш.	Skyshine	4-18
	References	4-28
	Problems	4-31
Chapt	ter 5 Induced Radioactivity at Accelerators	
I.	Fundamental principles of induced radioactivity at accelerators	5-1
II.	Activation of accelerator components	5-3
III.	Production and propagation of airborne radioactivity	5-21
	Soil and groundwater activation	5-32
	References	5-43
	Problems	5-47
Chap	ter 6 Radiation Protection Instrumentation at Accelerators	
I.	Introduction	6-1
Π.	Special considerations for accelerator environments	6-3
Ш.	Standard instruments and dosimeters	6-5
IV.	Specialized detectors	6-12
	References	6-40
	Problems	6-45